CRF Errors Corrected by th STIC Systems B nch

Serial Numb r: 09/887,552A

ENTERED

CRF Processing Date: 5/22/2002
Edited by: _____
Verified by: _____ (STIC staff) # 8

- [ ] Changed a file from non-ASCII to ASCII

- [ ] Changed the margins in cases where the sequence text was "wrapped" down to the next line.

- [ ] Edited a format error in the Current Application Data section, specifically: _____

- [ ] Edited the Current Application Data section with the actual current number. The number inputted by the applicant was [ ] the prior application data; or [ ] other _____.

- [ ] Added the mandatory heading and subheadings for "Current Application Data".

- [ ] Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

- [ ] Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____

- [ ] Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____

- [ ] Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____

- [ ] Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

- [ ] Inserted colons after headings/subheadings. Headings edited included: _____

- [ ] Deleted extra, invalid, headings used by an applicant, specifically: _____

- [x] Deleted: [x] non-ASCII "garbage" at the beginning/end of files; [x] secretary initials/filename at end of file; [ ] page numbers throughout text; [ ] other invalid text, such as _____.

- [ ] Inserted mandatory headings, specifically: _____

- [ ] Corrected an obvious error in the response, specifically: _____

- [ ] Edited identifiers where upper case is used but lower case is required, or vice versa.

- [ ] Corrected an error in the Number of Sequences field, specifically: _____

- [ ] A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

- [ ] Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____

- [ ] Other: _____
_____
_____
_____

*Examiner: The abov o rrections must b communicated to th applicant in the first Offic Action. DO NOT send a copy of this form.

3/1/95

OIPE

```
              RAW SEQUENCE LISTING              DATE: 05/22/2002
              PATENT APPLICATION:  US/09/887,552A    TIME: 17:15:50

              Input Set : A:\PTO.AMC.txt
              Output Set: N:\CRF3\05222002\I887552A.raw
```

```
 4 <110> APPLICANT: Brennan, Thomas J.
 5        Leviten, Michael W.
 7 <120> TITLE OF INVENTION: TRANSGENIC MICE CONTAINING CERBERUS GENE
 8        DISRUPTIONS
10 <130> FILE REFERENCE: R-67
12 <140> CURRENT APPLICATION NUMBER: US 09/887,552A
13 <141> CURRENT FILING DATE: 2001-06-21
15 <150> PRIOR APPLICATION NUMBER: US 60/213,670
16 <151> PRIOR FILING DATE: 2000-06-21
18 <150> PRIOR APPLICATION NUMBER: US 60/266,046
19 <151> PRIOR FILING DATE: 2001-02-01
21 <150> PRIOR APPLICATION NUMBER: US 60/282,668
22 <151> PRIOR FILING DATE: 2001-04-09
24 <160> NUMBER OF SEQ ID NOS: 4
26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 1752
30 <212> TYPE: DNA
31 <213> ORGANISM: Mus musculus
33 <220> FEATURE:
34 <221> NAME/KEY: misc_feature
35 <222> LOCATION: 1235, 1313
36 <223> OTHER INFORMATION: n = A,T,C or G
38 <400> SEQUENCE: 1
39 gggggggggg gggtcagag ggagctttct tttaggcccg tccatctgtg aatctaacct  60
40 cagtttctgg gaatcaggaa gcatgcatct cctcttagtt cagctgcttg ttctcttgcc  120
41 tctggggaag gcagacctat gtgtggatgg ctgccagagt cagggctctt tatcctttcc  180
42 tctcctagaa aggggtcgca gagatctcca cgtggccaac cacgaggagg cagaagacaa  240
43 gccggatctg tttgtggccg tgccacacct catgggcacc agcctggctg gggaaggcca  300
44 gaggcagaga gggaagatgc tgtccaggct tggaagattc tggaagaaac ctgagaccga  360
45 attttaccc ccaaggatg tggaaagcga tcatgtctca tcggggatgc aggccgtgac  420
46 tcagccagca gatgggagga aagtggagag atcacctcta caggaggaag ccaagaggtt  480
47 ctggcatcgg ttcatgttca gaaagggccc ggcgttccag ggagtcatcc tgcccatcaa  540
48 aagccacgaa gtacactggg agacctgcag gactgtgccc ttcaaccaga ccattgccca  600
49 tgaagactgt caaaaagtcg ttgtccagaa caaccttgc tttggcaaat gcagttccat  660
50 tcgtttccc ggagaagggg cagatgccca cagcttctgc tcccactgct cgcccaccaa  720
51 attcaccacc gtgcacttga tgctgaactg caccagccca acccccgtgg tcaagatggt  780
52 gatgcaagta gaagagtgtc agtgcatggt gaagacgaa cgtggagagg agcgcctcct  840
53 actggctggt tcccagggtt ccttcatccc tggacttcca gcttcaaaaa caaacccatg  900
54 aattacctca acagaaagca aaacctcaac agaataagtg agggttattc aatctggaaa  960
55 tgttatgtga gttatataaa gatcagtgga aaatatcttt ctctctcct ctctcccct  1020
56 ctctcttctc tctattttct ctctctctct ctctctctct ctctctctct ctctctctca  1080
57 cacacacaca cacacacaca cacacacaca catgtttgtg tttagacagg gtcttactgta  1140
```

```
                RAW SEQUENCE LISTING              DATE: 05/22/2002
                PATENT APPLICATION:  US/09/887,552A    TIME: 17:15:50

                Input Set : A:\PTO.AMC.txt
                Output Set: N:\CRF3\05222002\I887552A.raw

 58 ttctcagctg gcctcaaact cacaatgtgg ctggggatga ttttaaactc ctgatccaat 1200
 59 tcctgagtgc tgggattaca gacatgctcc ataanacata gctcccagaa ggatttttaa 1260
 60 aagagatttt gcatgtttca aagttgcctt tgagactcag aaatattttg atntattgaa 1320
 61 tggccttgcc acagatgtgg gaggcagctt gcttggtggc ccaagtattt tttttttgtt 1380
 62 cgttcagaat tctccacatg aagtttttac tgttggttat ctggcgttga agaaggaata 1440
 63 gtgaaggtac ttttaacagt ttacacgtgg aagggggctca ggcactagga accaaccttt 1500
 64 tcccggaata tgaggaaaat acatgaacag tattagagtc acttgaggaa gttactagga 1560
 65 aacgccataa gtctccaagt acattgtgag tcattttgaa ggacaatcgt gtatatagac 1620
 66 gaaatcttct actcgtatgc ttttgaatct tctagcaagt taggtttcta tgtttgggct 1680
 67 tcttcctatt gtctaagagt atgtgtgaca aattcaacct gacaaatacc tcaatggcaa 1740
 68 attctgaccc tg                                                     1752
 70 <210> SEQ ID NO: 2
 71 <211> LENGTH: 272
 72 <212> TYPE: PRT
 73 <213> ORGANISM: Mus musculus
 75 <400> SEQUENCE: 2
 76 Met His Leu Leu Leu Val Gln Leu Leu Val Leu Leu Pro Leu Gly Lys
 77  1               5                  10                  15
 78 Ala Asp Leu Cys Val Asp Gly Cys Gln Ser Gln Gly Ser Leu Ser Phe
 79                20                  25                  30
 80 Pro Leu Leu Glu Arg Gly Arg Arg Asp Leu His Val Ala Asn His Glu
 81            35                  40                  45
 82 Glu Ala Glu Asp Lys Pro Asp Leu Phe Val Ala Val Pro His Leu Met
 83        50                  55                  60
 84 Gly Thr Ser Leu Ala Gly Glu Gly Gln Arg Gln Arg Gly Lys Met Leu
 85 65                  70                  75                  80
 86 Ser Arg Leu Gly Arg Phe Trp Lys Lys Pro Glu Thr Glu Phe Tyr Pro
 87                    85                  90                  95
 88 Pro Arg Asp Val Glu Ser Asp His Val Ser Ser Gly Met Gln Ala Val
 89                100                 105                 110
 90 Thr Gln Pro Ala Asp Gly Arg Lys Val Glu Arg Ser Pro Leu Gln Glu
 91            115                 120                 125
 92 Glu Ala Lys Arg Phe Trp His Arg Phe Met Phe Arg Lys Gly Ala Pro
 93        130                 135                 140
 94 Phe Gln Gly Val Ile Leu Pro Ile Lys Ser His Glu Val His Trp Glu
 95 145                 150                 155                 160
 96 Thr Cys Arg Thr Val Pro Phe Asn Gln Thr Ile Ala His Glu Asp Cys
 97                    165                 170                 175
 98 Gln Lys Val Val Val Gln Asn Asn Leu Cys Phe Gly Lys Cys Ser Ser
 99                180                 185                 190
100 Ile Arg Phe Pro Gly Glu Gly Ala Asp Ala His Ser Phe Cys Ser His
101            195                 200                 205
102 Cys Ser Pro Thr Lys Phe Thr Thr Val His Leu Met Leu Asn Cys Thr
103     210                 215                 220
104 Ser Pro Thr Pro Val Val Lys Met Val Met Gln Val Glu Glu Cys Gln
105 225                 230                 235                 240
106 Cys Met Val Lys Thr Glu Arg Gly Glu Glu Arg Leu Leu Leu Ala Gly
107                245                 250                 255
108 Ser Gln Gly Ser Phe Ile Pro Gly Leu Pro Ala Ser Lys Thr Asn Pro
```

RAW SEQUENCE LISTING   DATE: 05/22/2002
PATENT APPLICATION: US/09/887,552A   TIME: 17:15:50

Input Set : A:\PTO.AMC.txt
Output Set : N:\CRF3\05222002\I887552A.raw

```
109              260              265              270
112 <210> SEQ ID NO: 3
113 <211> LENGTH: 200
114 <212> TYPE: DNA
115 <213> ORGANISM: Artificial Sequence
117 <220> FEATURE:
118 <223> OTHER INFORMATION: Targeting vector
120 <400> SEQUENCE: 3
121 tccatctgtg aatctaacct cagtctctgg gaatcaggaa gcatgcatct cctcttagtt 60
122 cagctgcttg ttctcttgcc tctgggaag gcagacctat gtgtggatgg ctgccagagt 120
123 cagggctctt tatccttttcc tctcccagaa aggggtcgca gagatctcca cgtggccaac 180
124 cacgaggagg cagaagacaa                                          200
126 <210> SEQ ID NO: 4
127 <211> LENGTH: 200
128 <212> TYPE: DNA
129 <213> ORGANISM: Artificial Sequence
131 <220> FEATURE:
132 <223> OTHER INFORMATION: Targeting vector
134 <400> SEQUENCE: 4
135 cctgcccatc aaaagccacg aagtacactg ggagacctgc aggactgtgc ccttcaacca 60
136 ggtatgcatt ctagagggta aaccaccagt ttgccagaca gggaggacag ctggacagct 120
137 aggacaaacg gcaaaataga aagagtctgg cgagagctcg ggccttgtct agttccagat 180
138 tcagtccttt gggtattcat                                          200
```
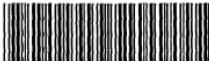
```
RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 05/22/2002
PATENT APPLICATION:  US/09/887,552A     TIME: 17:15:51

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF3\05222002\I887552A.raw
```

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 1235,1313

OIPE

RAW SEQUENCE LISTING   DATE: 05/13/2002
PATENT APPLICATION: US/09/887,552A   TIME: 16:48:26

Input Set : A:\R-67 Sequence listing for submission.txt
Output Set: N:\CRF3\05132002\I887552A.raw

Does Not Comply
Corrected Diskette Needed

```
    4 <110> APPLICANT: Brennan, Thomas J.
    5         Leviten, Michael W.
    7 <120> TITLE OF INVENTION: TRANSGENIC MICE CONTAINING CERBERUS GENE
    8         DISRUPTIONS
   10 <130> FILE REFERENCE: R-67
   12 <140> CURRENT APPLICATION NUMBER: US 09/887,552A
C--> 13 <141> CURRENT FILING DATE: 2002-04-30
   15 <150> PRIOR APPLICATION NUMBER: US 60/213,670
   16 <151> PRIOR FILING DATE: 2000-06-21
   18 <150> PRIOR APPLICATION NUMBER: US 60/266,046
   19 <151> PRIOR FILING DATE: 2001-02-01
   21 <150> PRIOR APPLICATION NUMBER: US 60/282,668
   22 <151> PRIOR FILING DATE: 2001-04-09
   24 <160> NUMBER OF SEQ ID NOS: 4
   26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
```

ERRORED SEQUENCES

```
  126 <210> SEQ ID NO: 4
  127 <211> LENGTH: 200
  128 <212> TYPE: DNA
  129 <213> ORGANISM: Artificial Sequence
  131 <220> FEATURE:
  132 <223> OTHER INFORMATION: Targeting vector
  134 <400> SEQUENCE: 4
  135 cctgcccatc aaaagccacg aagtacactg ggagacctgc aggactgtgc ccttcaacca 60
  136 ggtatgcatt ctagagggta aaccaccagt ttgccagaca gggaggacag ctggacagct 120
  137 aggacaaacg gcaaaataga aagagtctgg cgagagctcg ggccttgtct agttccagat 180
  138 tcagtccttt gggtattcat                                            200
E--> 142 (1)
```

VERIFICATION SUMMARY   DATE: 05/13/2002
PATENT APPLICATION: US/09/887,552A   TIME: 16:48:27

Input Set : **A:\R-67 Sequence listing for submission.txt**
Output Set: **N:\CRF3\05132002\I887552A.raw**

```
L:13  M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:59  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1200
L:60  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1260
L:142 M:254 E: No. of Bases conflict, this line has no nucleotides.
```